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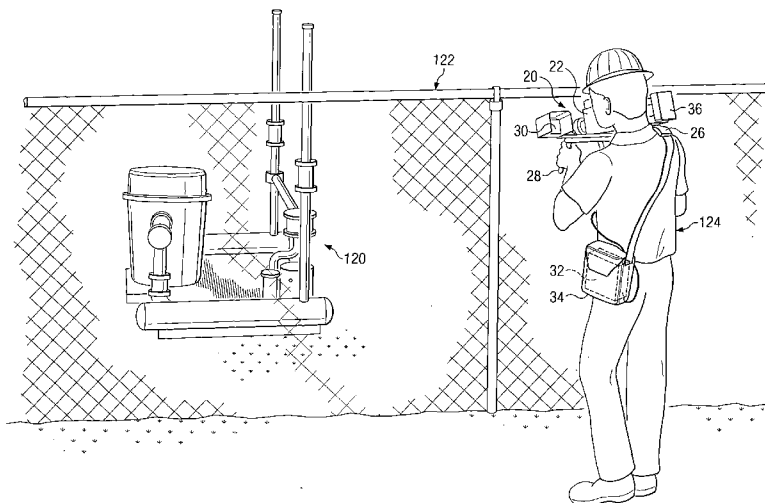
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(54) Title: SYSTEMS AND METHODS FOR PERFORMING INSPECTIONS AND DETECTING CHEMICAL LEAKS USING AN INFRARED CAMERA SYSTEM



(57) Abstract: A passive infrared camera system (22) adapted to provide a visual image of a chemical (140) emanating from a component having the chemical therein is disclosed. The passive infrared camera system (22) includes a lens (38), a refrigerated portion (42), and a refrigeration system (60). The refrigerated portion (42) has therein an infrared sensor device (44) and an optical bandpass filter (46). The infrared sensor device (44) is adapted to capture an infrared image from the lens (38). The optical bandpass filter (46) is located along an optical path between the lens (38) and the infrared sensor device (44). At least part of a pass band (80) for the optical bandpass filter (46) is within an absorption band (e.g., 71, 72) for the chemical. The refrigeration system (60) is adapted to cool the refrigerated portion (42) of the infrared camera system (22).